

310 Wayto Road | Schenectady, NY 12303 ● TEL: 800-283-3888 | FAX: 518-357-9636
EMAIL: moreinfo@sandellmfg.com | www.diedrichtechnologies.com

ENVIRESTORE 100™

1. PRODUCT DATA

Product Name: ENVIRESTORE 100™

Producer: Diedrich Technologies, A Hohmann & Barnard Company, 310 Wayto Road, Schenectady, NY 12303

Company Contact: Ken Eglin

Telephone: 800-283-3888

24-Hour Emergency Contact: CHEMTREC 800-424-9300

This product is manufactured for Commercial/Industrial use. Not recommended for: Household use.

2. HAZARDOUS IDENTIFICATION

GHS Ratings:

Oral Toxicity: Acute Tox. 5

Anticipated oral LD50 between 2000 and 5000 mg/kg;
Indication of significant effect in humans; Any mortality at class 4; Significant clinical signs at class 4

Inhalation Toxicity: Acute Tox. 2

Gases>100+<=500ppm, Vapors>0.5+<=2mg/l,
Dusts & mists>0.05+<=0.5mg/l

Skin corrosive: 1A

Destruction of dermal tissue: Exposure < 3 min. Observation < 1 hour, visible necrosis in at least one animal

Eye corrosive: 1

Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity >= 3, Iritis > 1.5

Respiratory sensitizer: 1

Respiratory sensitizer

Carcinogen: 1B

Presumed Human Carcinogen, Based on demonstrated animal carcinogenicity

Reproductive toxin: 2

Human or animal evidence possibly with other information

GHS Hazards:

H303 May be harmful if swallowed

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H330 Fatal if inhaled

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H350 May cause cancer

H361 Suspected of damaging fertility or the unborn child

GHS Precautions:

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood

P260 Do not breathe dust/fume/gas/mist/vapours/spray

P261 Avoid breathing dust/fume/gas/mist/vapours/spray

P264 Wash skin thoroughly after handling

P271 Use only outdoors or in a well-ventilated area

P280 Wear protective gloves/protective clothing/eye protection/face protection

P281 Use personal protective equipment as required

P284 Wear respiratory protection

P285 In case of inadequate ventilation wear respiratory protection

P310 Immediately call a POISON CENTER or doctor/physician

P312 Call a POISON CENTER or doctor/physician if you feel unwell

P320 Specific treatment is urgent (see section 4)

P321 Specific treatment (see section 4)

P363 Wash contaminated clothing before reuse

P301+P330+P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P303+P361+P353

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P304+P341

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+P351+P338

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

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P308+P313

IF exposed or concerned: Get medical advice/attention

P342+P311

Call a POISON CENTER or doctor/physician

P405 Store locked up

P403+P233

Store in a well ventilated place. Keep container tightly closed

P501 Dispose of contents/container according to local, state and federal regulations

Danger



Hazards Not Otherwise Classified: N/A

3. COMPOSITION

Chemical Name	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Phosphoric acid 7664-38-2 14 percent	1 mg/m3 TWA	3 mg/m3 STEL 1 mg/m3 TWA	NIOSH: 1 mg/m3 TWA 3 mg/m3 STEL
Citric Acid 77-92-9 10 percent			
Ammonium bifluoride 1341-49-7 4 percent			
Sulfuric acid 7664-93-9 2 percent	1 mg/m3 TWA	0.2 mg/m3 TWA (thoracic fraction)	NIOSH: 1 mg/m3 TWA

4. FIRST AID

Inhalation: Remove from further exposure. For those providing assistance, avoid exposure to yourself. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, a trained individual should attempt to resuscitate while getting immediate medical aid.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes.

Skin Contact: In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water.

Ingestion: If conscious, give 2 to 3 glasses of water. Do not induce vomiting and seek medical attention immediately.

Notes to Physician: No data found.

5. FIRE FIGHTING MEASURES

Flammable Limits: LEL: N/A UEL: N/A

Flash Point: No data available.

Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Unusual Fire or Explosion Hazards: No data available.

Hazardous Combustion Products: See Section 10 for a list of hazardous decomposition products for this mixture.

Fire Fighting: If evacuation of personnel is necessary, evacuate to an upwind area. Decontaminate personnel and equipment with a water wash-down after fire and smoke exposure.

Fire Fighting: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Isolate the area and contain the spilled material. Persons not wearing the appropriate PPE should be removed from the area until the spill is cleaned up. Stop leak if you can do it without risk, stay upwind, and avoid run off to waterways and sewers.

SMALL SPILLS: Prevent entry into waterways, sewers, basements or confined areas. Use a non-combustible material like vermiculite or sand to soak up the product and place into a container for later disposal.

LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas. Dike to collect large liquid spills, collect leaking liquid in sealable compatible containers.

ACID SPILLS: Neutralize with Soda Ash, (Sodium Carbonate) Hydrated Lime, (Calcium Hydroxide) or Baking Soda (Sodium Bicarbonate). Cautiously neutralize remainder. Then wash away with plenty of water.

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7. HANDLING AND STORAGE

Handling Precautions: Wear all appropriate Personal Protective Equipment (PPE). Wear respiratory protection or ensure adequate ventilation at all times as vapors can accumulate in confined or poorly ventilated areas. Use the product in a manner which minimizes splashes and/or the creation of dust. Keep containment closed when not in use. Do not handle or store material near heat, sparks, or open flames, or other sources of ignition.

Storage: Prevent from freezing. Store at room temperatures, i.e., 40° to 95°F (4° to 35°C)

Regulatory Requirements: No data found

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Chemical Name/CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Phosphoric acid 7664-38-2	1 mg/m3 TWA	3 mg/m3 STEL 1 mg/m3 TWA	NIOSH: 1 mg/m3 TWA 3 mg/m3 STEL
Citric Acid 77-92-9			
Ammonium bifluoride 1341-49-7			
Sulfuric acid 7664-93-9	1 mg/m3 TWA	0.2 mg/m3 TWA (thoracic fraction)	NIOSH: 1 mg/m3 TWA

Engineering controls: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Ensure that eyewash stations and safety showers are close to the workstation location.

Ventilation Control: Provide adequate ventilation to control airborne concentration below the exposure guidelines/limits.

Administrative controls: No data found.

Personal Protection: As prescribed in the OSHA Standard for Personal Protective Equipment (29 CFR 1910.132), employers must perform a hazard Assessment of all workplaces to determine the need for proper protective equipment for each employee.

Eye Protection: Normal industrial eye protection practices should be employed.

Skin Protection: In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Respiratory: If airborne concentration limits are not met, an approved respirator must be worn.

Contaminated Equipment: Dispose of the waste in compliance with federal, state, regional, and local regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Melting point: Not Determined

Freezing point: Not Determined

Solubility: Complete

Boiling range: 100°C

Flash point: 999°C, 999°F

Evaporation rate: Not Determined

Flammable Limits: LEL: N/A UEL: N/A

Appearance: Clear, Colorless

Odor: Pungent

Physical State: Liquid

Vapor Pressure: Not Determined

Odor threshold: Not Determined

Vapor Density: Not Determined

pH: Strong Acid <1

Explosive Limits: 0%

Partition coefficient (n-Octanol/water): Not Determined

Autoignition temperature: 1010°C

Decomposition temperature: Not Determined

Viscosity: Not Determined

Density: 1.192525015

Weight Per Gallon: 8.5 lbs

10. STABILITY AND REACTIVITY

Stability: STABLE

Incompatibilities: Avoid contact with strong bases.

Hazardous Decomposition Products: *Note:* these are all possible decomposition products based on molecular structure of components:

- Oxides of Sulfur
- Oxides of Phosphorus
- Hydrogen or Hydrogen Fluoride
- Oxides of Nitrogen or Ammonia
- Oxides of Carbon
- Hazardous polymerization will not occur

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11. TOXICOLOGICAL INFORMATION

Mixture Toxicity:

Oral Toxicity: 2,366.00mg/kg
Inhalation Toxicity: 0.08mg/L

Component Toxicity: 7664-38-2 Phosphoric acid

Oral: 1,530.00 mg/kg (Rat)
Dermal: 2,730.00 mg/kg (Rabbit)

Routes of entry: No data found.

Target Organs: Eyes, Skin, Respiratory System

Effects of Overexposure: Causes severe skin burns and eye damage

CAS Number	Description	% Weight	Carcinogen Rating
7664-93-9	Sulfuric Acid	2	IARC: Human Carcinogen OHS: Listed

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available for this product.

Component Ecotoxicity:

Citric Acid: 96 Hr LC50 Lepomis macrochirus:
1516 mg/L [static]
Sulfuric Acid: 96 Hr LC50 Brachydanio rerio:
>500 mg/L [static]

13. DISPOSAL

Disposal Instructions: Refer to the latest federal, state, and local regulations regarding proper disposal.

14. TRANSPORTATION INFORMATION

The following is for US DOT Highway transportation. Other modes/jurisdictions may have different classifications.

Agency	Proper Shipping Name	UN Number	Packaging Group	Hazard Class
US DOT	Corrosive Liquid NOS (Phosphoric Acid Glycolic Acid)	UN1760	II	8

15. REGULATORY INFORMATION

This listing is to highlight federal level regulation of the product. Individual states, and other nations may have further regulations not listed below.

US DOT List of Marine Pollutants (172.101 - Appendix B): None

US DOT List of Hazardous Substances and Reportable Quantities (172.101 Appendix A):

7664-93-9 Sulfuric acid 2 %
1341-49-7 Ammonium bifluoride 4 %
7664-38-2 Phosphoric acid 14 %

US DOT List of Severe Marine Pollutants (172.101 - Appendix B): None

SARA Section 302 Extremely Hazardous Substances (40 CFR 355): 7664-93-9 Sulfuric acid 2 %

Sara Section 302 Threshold Planning Quantity: 7664-93-9 Sulfuric acid 2 %

SARA Section 313, Toxic Chemicals (40 CFR 372.65): 7664-93-9 Sulfuric acid 2 %

SARA Reportable Quantity:

7664-93-9 Sulfuric acid 2 %
1341-49-7 Ammonium bifluoride 4 %
7664-38-2 Phosphoric acid 14 %

Toxic Substances Control Act (TSCA): All components are listed or exempt from the Toxic Substances Control Act except those listed below.
- None

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1985 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act, and Title 40 of the Code of Federal Regulations, part 372.
7664-93-9 Sulfuric acid 2.0%

16. OTHER INFORMATION

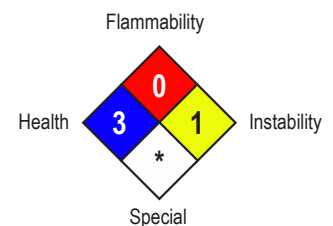
Date of Preparation: July 1st, 2016

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Hazardous Material Information System (HMIS)

National Fire Protection Association (NFPA)

Health	3
Flammability	0
Physical Hazard	1
Personal Protection	D



HMIS & NFPA Hazard Rating Legend

* = CHRONIC HEALTH HAZARD
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

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LEGEND

0 = LEAST 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME

N.D. = NOT DETERMINED N.A. = NOT AVAILABLE N/A = NOT APPLICABLE

DISCLAIMER: While this company believes that the data contained herein are factual and the opinions expressed are based on tests and data believed to be reliable, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by this company as to the effects of such use, the results to be obtained, or the safety and toxicity of the product, nor does this company assume any liability arising out of use, by others, of the product referred to herein. Nor is this information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or governmental regulations.

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